ROLTA ONEVIEW™
for Departments of Transportation

OUTCOME-BASED PLANNING AND REPORTING

The Need:

DOTs across the country face numerous challenges leveraging initiatives and investments to meet local, regional and national goals and priorities. For example, the Moving Ahead for Progress in the 21st Century Act (MAP-21) mandates a performance-based approach as opposed to the generally process-oriented one that the GAO found these agencies take.

The GAO has reported that many federal transportation programs do not effectively address key challenges, have unclear federal goals and roles, and lack links to performance.[1] For highways, for example, the MAP-21 act identified seven national performance goals for areas including pavement and bridge conditions, fatalities and injuries, and traffic congestion. MAP-21 also provided for the creation of performance measures and targets and links funding to performance, thus enhancing accountability for results.

1. Department of Transportation: Key Issues and Management Challenges, 2013

The Answer:

ROLTA

OneView™

Enterprise Suite

Rolta OneView™ for Transportation -
## Linear analytics drive greater executive insights

Rolta OneView delivers executives a precise yet holistic view of an operation's overall effectiveness and efficiency, along with the tactical data managers need to achieve improvements. Information compiled from disparate systems across the enterprise and presented in dashboard view immediately uncovers critical process, production and asset situations that, without immediate attention, can cause huge production losses and unsafe conditions. Rolta OneView allows executives to quickly understand what is working, what isn't, what soon may not, and to consider what if scenarios. Location visualization further enhances operational levels of understanding by showing where it is.

Rolta OneView touches the nerve center of all critical functions, providing users with the status of hundreds of industry-specific KPIs, such as asset utilization, inventory, cost control, compliance, customer impact, system reliability and much more – presenting past, current, and predictive analysis based future views to optimally manage enterprise operations. No other business intelligence solution combines the power of SAP technologies with the depth of asset and production insight and the breadth of integrated departmental databases.

You need very specific information that enables you to maximize efforts. Information specific to your responsibilities.

Rolta OneView enables users to create profiles that are tied to roles and permission levels. Log on and you instantly have access to exactly the information you need to better understand situations under your purview and to generate proven, performance-based results.
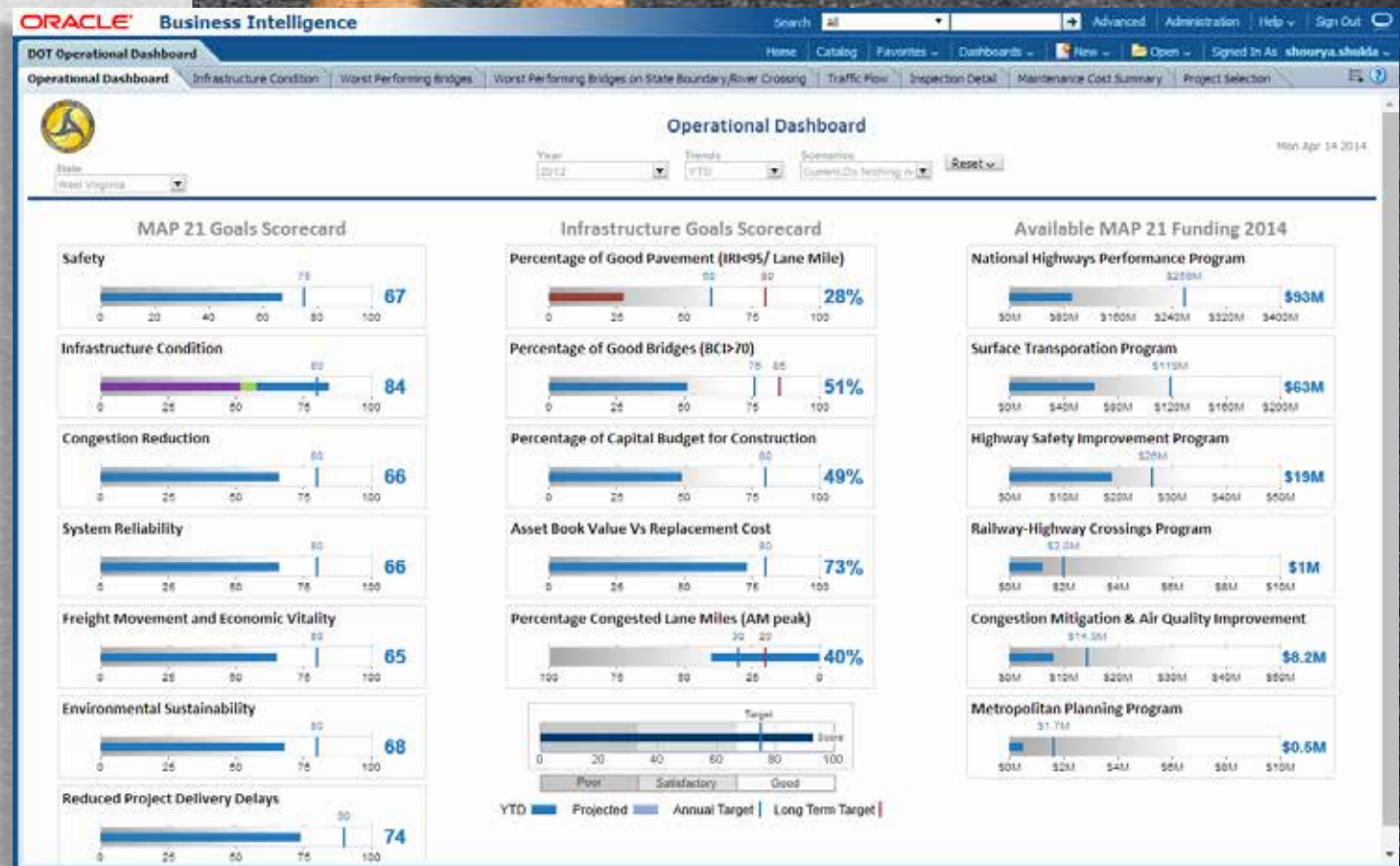
OneView™
Enterprise Suite

Instant Insights in Dashboard Format
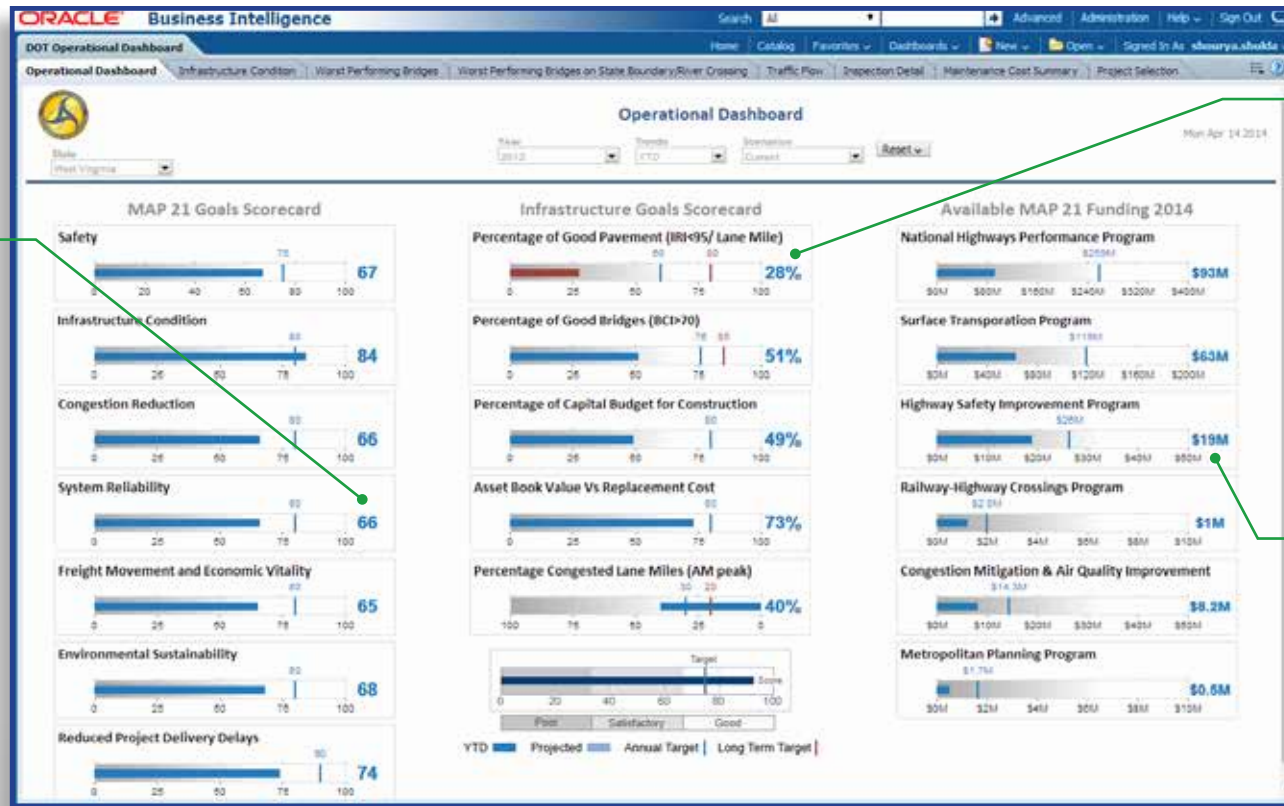
The Data: Publicly available state Department of Transportation metrics submitted to the Federal Highway administration. Multi-year data from the HPMS that deals with pavements and roadways, NBII that is based on the bridge inventory for the state as well as FARS which is the record of fatal accidents for the state were brought information into a spatially enabled Oracle Warehouse that was modeled as a dimensional model to allow the analysis that you see on the screen.
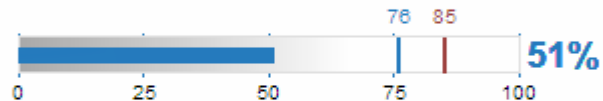
Operational Dashboard

Year	Trends	Scenarios
2012	YTD	Current;Do Nothing ne

Infrastructure Goals Scorecard

Percentage of Good Pavement (IRI<95/ Lane Mile)

28%
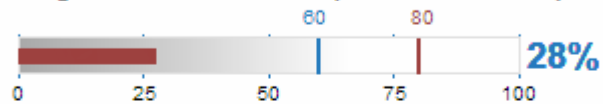
Percentage of Good Bridges (BCI>70)

51%

Percentage of Capital Budget for Construction

49%
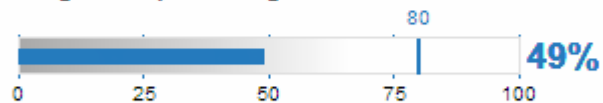
Asset Book Value Vs Replacement Cost

73%

Percentage Congested Lane Miles (AM peak)

40%
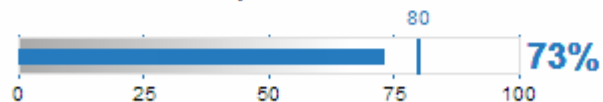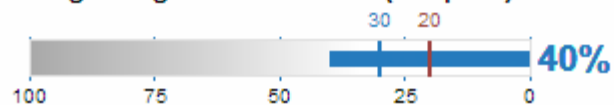
Each measure shows a target value and current progress. Bullet charts enable you to see at a glance how the organization is doing overall in reaching critical goals and milestones.

Some measures are presented reversed, such as Percentage of Congested Lane Miles (AM Peak), in which the effort is to reduce the value. The Rolta OneView dashboard clearly shows that 40% is operating at a level of Service D or higher. Goals to bring this down to 30% by year end and to 20% over the long term are marked on the chart, showing real-time status of goal achievement.

Rolta OneView provides Executive Insights to improve performance and create outcome-based strategies.
- Track progress on organizational goals
- Link project performance to transportation outcomes
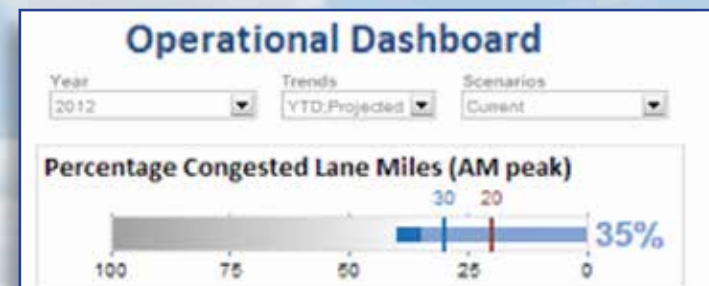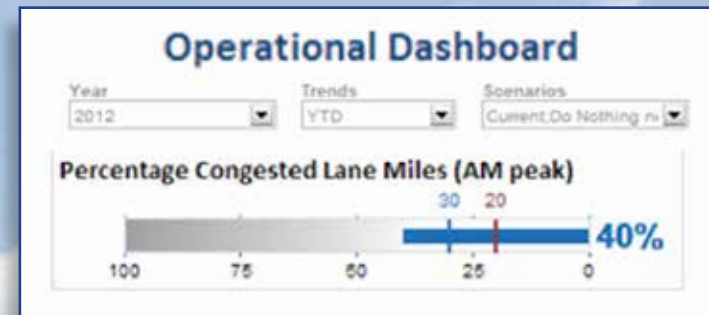- Track performance of KPIs

KNOW...

WHERE YOU ARE

WHERE YOU ARE GOING

HOW LONG TO REACH YOUR DESTINATION

Rolta OneView accesses information in a warehouse that is continuously updated from Line of Business systems to provide information on where you are in achieving key goals. More importantly, by selecting the "Projected" option on the dashboard, you see where the organization will be based on current trends, both in terms of short term predictions as well as project improvements that are on schedule and on budget.

You can also see outcomes of different funding scenarios. The default is Do Nothing, which takes into account the natural growth in traffic along with deterioration of physical assets such as pavements and bridges, but does not allocate any capital improvements. You can create scenarios based on different prioritization approaches and Rolta OneView translates the project outcomes to impacts on the performance measures.

Operational Dashboard

Year	Trends	Scenarios
2012	YTD	Current,Do Nothing n

Percentage Congested Lane Miles (AM peak)

30 20

100 75 50 25 0 **40%**

Operational Dashboard

Year	Trends	Scenarios
2012	YTD,Projected	Current

Percentage Congested Lane Miles (AM peak)

30 20

100 75 50 25 0 **35%**

Drill Down into Operational KPIs to Understand Status

On this Executive Dashboard, Infrastructure has a score of 84. But what does it mean? Rolta OneView easily drills down into the data so you can see the underlying KPIs that make up the score. For example, some key indicators for bridge and pavement infrastructure make up the score.

We can see that 18% of deck area is on structurally deficient or functionally obsolete bridges, and that 33% of the bridges longer than 20 feet haven't been inspected in the last two years. Other KPIs comprising the Infrastructure score include percentage of bridges in good and poor condition, percentage of good pavement as well as per mile maintenance cost.

The map on the right of the screen provides location visualization that further enhances operational levels of understanding.
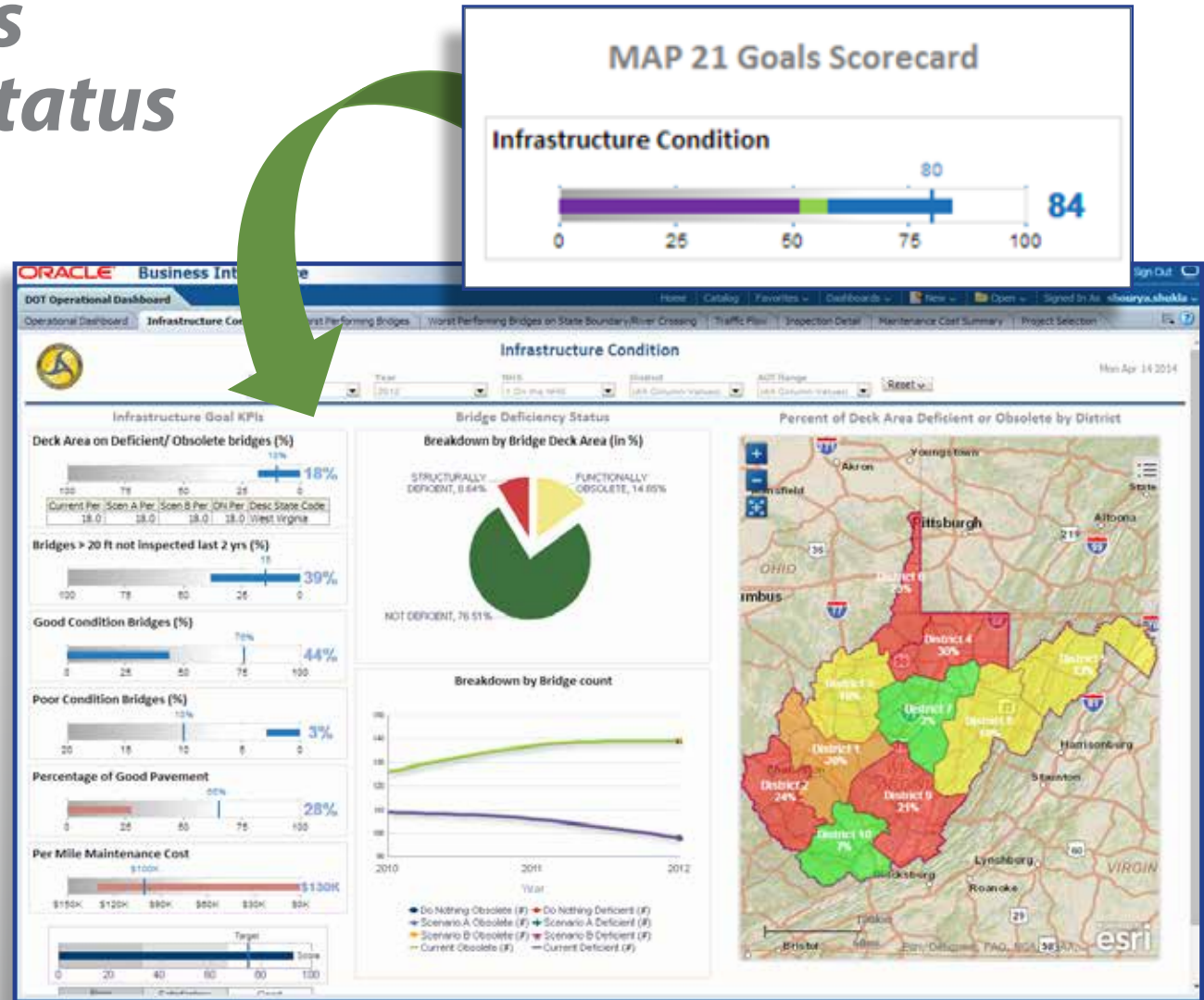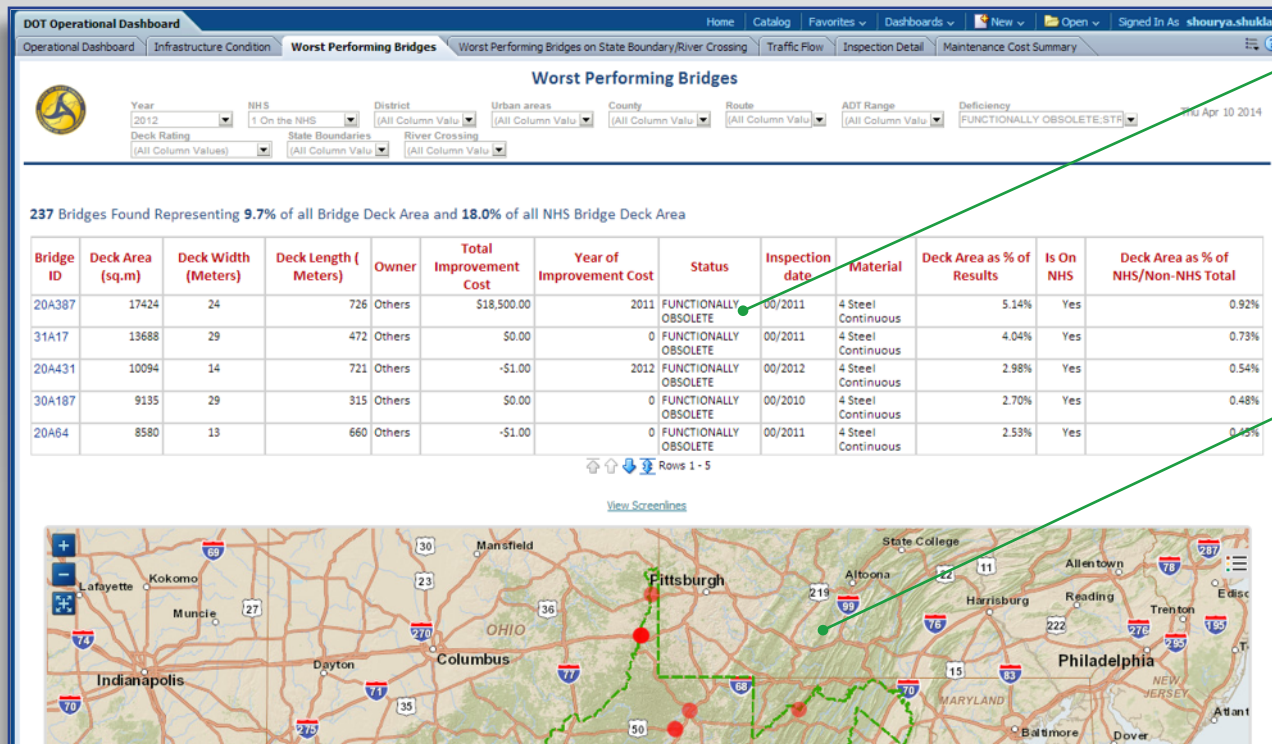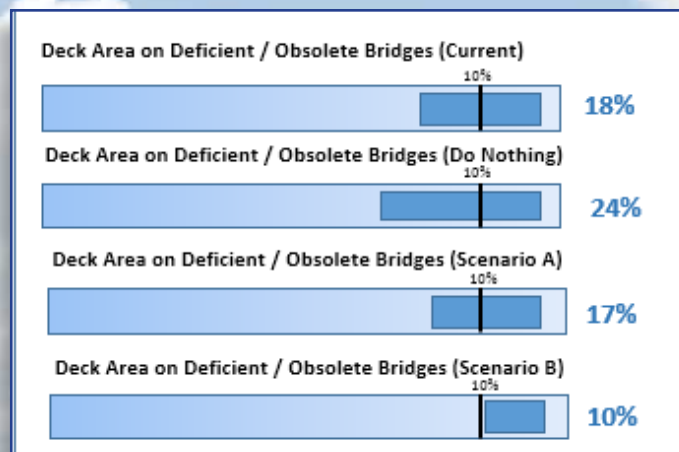
What's Working
What's Not
What Soon Won't
Where It's Located

Drilling down further on NHS bridges, Rolta OneView shows that 237 Obsolete and Deficient bridges make up the 18% value, and includes a list of those bridges and the percentage each contributes to the total. So it's easy to see that if you repair the first bridge listed it would drop the 18% number by a percentage point.

Rolta OneView also plots the bridges on the map and can filter by District, Urban Areas, whether they cross a state boundary or a river to get a better understanding that may help in formulating projects.

Predictive analytics shows the outcomes of various scenarios you choose.

Using a combination of spatial and advanced analytics, Rolta OneView allows transportation organizations to drill down and understand specific problem areas that need to be addressed. It helps organizations understand where they are going to be based on active projects and program options, and specifically which investments will give them the biggest bang for the buck.

Breakdown by Bridge count

Year	
2014	
2015	
2016	
2017	

(Y-axis: 90, 100, 110, 120, 130, 140, 150)

Deck Area on Deficient / Obsolete Bridges (Current)
10%
18%

Deck Area on Deficient / Obsolete Bridges (Do Nothing)
10%
24%

Deck Area on Deficient / Obsolete Bridges (Scenario A)
10%
17%

Deck Area on Deficient / Obsolete Bridges (Scenario B)
10%
10%

?

PREDICTING THE FUTURE
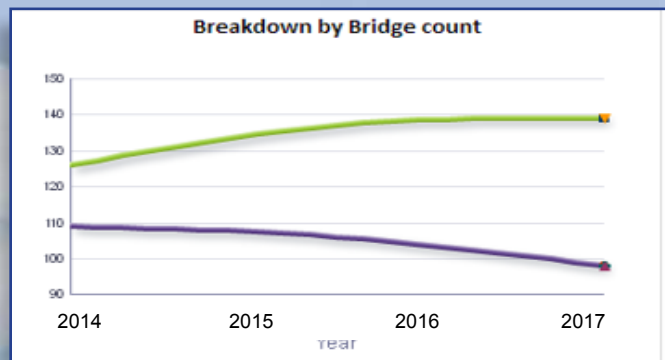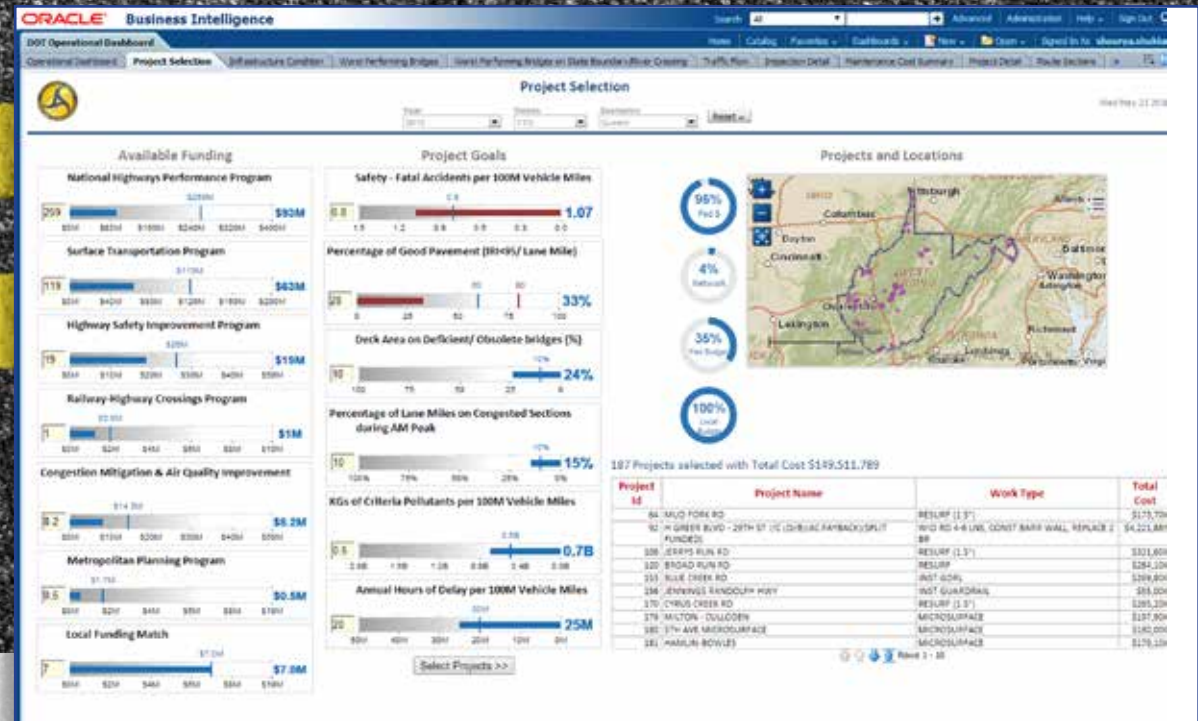
Rolta OneView also shows the impact of different investment choices under various scenarios to help identify and prioritize projects.

The Project Selection Module shows the funds available under each of the programs. The middle column shows distinct KPIs the agency is trying to measure. The user can adjust the dollar amounts or the targets and then click on Select projects. The input into the model is a list of project details translated to benefits such as reduction in vehicle density during AM peak, New IRI values, updated bridge conditions, reduction in accident rate, etc.

A Sampling of Mission-Critical Insights Delivered by Rolta OneView

Executive Insights
- Track progress on organizational goals
- Link project performance to transportation outcomes
- Track performance of KPIs

Planning Insights
- Match investment options to planning outcomes
- Understand and visualize asset condition
- View traffic and transit demand forecast
- Assess multi-modal efficiency

Infrastructure Condition Insights
- Determine optimal investment strategies
- Gather asset information for condition, state of good repair, risk profile and lifecycle cost
- View future condition forecasts

Congestion Insights
- Visualize congestion data on maps
- Analyze capacity and modal mix impacts on Level of Service
- Plan capacity interventions

OneView™
Enterprise Suite

Rolta OneView™

Rolta OneView brings business value through the delivery of role-based, actionable insights and correlated operational and business intelligence that supports informed decision making and drives business transformation. It provides industry-specific, rich solutions and KPIs.

The innovative solution breaks down the fundamental barriers in achieving operational and business excellence, such as data silos across the enterprise, thereby providing a 360° view of operations. It touches the nerve center of all critical functions, instilling best practices and accelerating improvement of processes. Rolta OneView's logical architecture, derived with the "Integrate-Analyze-Deliver" theme, is built using best-of-breed BI platforms as well as significant Intellectual Property from Rolta.

About Rolta

Rolta is a leading provider of Consulting, Managed Services and Technology for many vertical segments, including asset intensive industries like Transportation; Upstream, Midstream and Downstream Oil & Gas; Power Generation; Petrochemicals and Chemicals. Enterprise-level solutions are built around Rolta's intellectual property and domain expertise to offer deep insights and understanding of industry drivers and supporting business processes that help organizations achieve their business goals. Through our innovative approach, Rolta makes a lasting impact on your business.

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